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FEDERAL COMMUNICATIONS COMMISSION

[WC Docket No. 16-271; DA 20-1097; FRS 17087]

Connect America Fund—Alaska Plan

AGENCY: Federal Communications Commission.

ACTION: Notice.

SUMMARY: The Wireless Telecommunications Bureau (Bureau) adopts the Alaska Population Distribution Model. The model provides a methodology for estimating the number of Alaskans who receive mobile service within census blocks in remote areas of Alaska, allowing consistent understanding of where providers need to provide coverage for their approved commitments under the Alaska Plan. The Bureau will also use the methodology for creation of an explicit list of census blocks eligible for use of frozen support under the Alaska Plan.

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SUPPLEMENTARY INFORMATION: This is a summary of the Bureau's Order in WC Docket No. 16-271; DA 20-1097, which was released on September 16, 2020. The full text of document DA 20-1097 may be found at: *http://apps.fcc.gov/edocs/*. To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an email to *fcc504@fcc.gov*, or call the Consumer and Governmental Affairs Bureau at (202) 418-0530 (voice).

SYNOPSIS:

1. In this Order, the Bureau adopts a methodology for estimating the number of Alaskans who receive mobile service within census blocks in remote areas of Alaska. The

Bureau will use this methodology to determine whether mobile providers that participate in the Commission's plan for providing support for the deployment of fixed and mobile service in high cost areas of Alaska (the Alaska Plan) have met their performance commitments. The Bureau will also use the methodology to identify census blocks in remote areas of Alaska where these minimum service commitments apply.

2.   Alaska faces unique circumstances, including its massive size, varying terrain, harsh climates, isolated populations, shortened construction season, and lack of access to infrastructure, which have made deploying communications infrastructure particularly challenging for Alaskan providers.   To address Alaska's unique challenges, the Commission adopted the Alaska Plan Order in 2016, which set forth a ten-year universal service plan specific to Alaska. The Alaska Plan Order froze mobile provider participants' support at December 2014 levels (frozen support), but required them to commit to expanding their Fourth-Generation, Long-Term Evolution (4G LTE) service at speeds of at least 10/1 Mbps in eligible areas, subject to exceptions such as limited middle mile capability.

3.   *Mobile Provider Commitments*.   Under the Alaska Plan Order's requirements, participating mobile providers must serve a specific number of people in remote parts of Alaska by the end of year 5 (ending December 31, 2021) and year 10 (ending December 31, 2026) of the support term. As part of their commitments, providers must identify the mobile technology that they will use to serve those populations (e.g., 3G, LTE) and the type of middle-mile connectivity (e.g., fiber, satellite) on which they will rely to provide mobile services. The Alaska Plan required participating mobile service providers to submit performance plans with their commitments for Bureau review.   In December 2016, the Bureau approved the service commitments made by eight Alaskan mobile service providers, and it subsequently accepted

updated commitments from ASTAC and GCI.   The Alaska Plan Order stated that the

Commission would rely on participating providers' Form 477 coverage data to evaluate whether

providers have met their 5 and 10 year commitments. The Commission delegated authority to

the Bureau to require additional information necessary to establish clear standards for

determining whether providers have met their 5 and 10-year commitments.

4.   *Proposed Alaska Population-Distribution Model*. To establish a consistent

methodology for determining the number of people served in Alaskan census blocks, the Bureau

sought comment on a model, which the Bureau named the Alaska Population-Distribution

Model, to estimate the number of Alaskans who receive mobile service in census blocks in

remote areas. The Alaska Population Model Public Notice sought comment on using this

methodology for the purpose of evaluating whether participating providers have met their

performance obligations associated with receiving frozen support under the Alaska Plan. The

Alaska Population-Distribution Model identifies areas within a census block where people are

likely to live and then evenly distributes the population throughout the livable area of the census

block.

5.   Specifically, the model uses a multi-step process to identify areas within a census

block most likely to be populated and combines those results with service coverage maps to

estimate the number of people with mobile wireless service in a partially-served census block.

The model uses TIGER road data overlaid onto populated census blocks, under the premise that

local roads (not highways or expressways) are a reliable predictor of population locations.   Next,

the model draws polygons extending 100 meters on either side of those roads, with areas further

out assumed to be uninhabited. The model also overlays General Land Status data maintained by

the State of Alaska and removes areas where people are unlikely to reside, such as National

Forest Service land. Finally, the model evenly distributes the population of each census block within the remaining polygons to reflect the geographic areas where people are likely to live. For those census blocks where no populated areas are identified, the methodology evenly distributes the Census-reported population of each block across land within that block owned by municipalities, private entities, or Alaska Natives. If there is no land owned by those groups, then the population is distributed across the entire census block.

6.   The Alaska Population Model Public Notice sought comment on exceptions to the methodology in four areas of Alaska in which the proposed methodology might not accurately reflect population coverage. Specifically, the Bureau proposed to adopt the following deviations from the general methodology:

- In and around Unalaska, in an area covering 31 census blocks, address and other population location information from the local government could be used to create polygons around addresses (with a 50-meter buffer) in residential areas to represent the location of the population.

- Near Nome and Unalakleet, in an area covering 187 census blocks, aerial imagery data from Google Earth can be used to identify building structures, and polygons could be drawn around them as a proxy for the location of population.

- In the Prudhoe Bay area, in an area covering 16 census blocks where 2010 census data likely primarily reflects oil field workers rather than year-round population, Google Earth and internal ASTAC location data can be used to identify populated areas (primarily developed worksites, mobile camps, and staging areas).

- In the Copper Valley, in an area covering 61 census blocks, Google Earth and internal Copper Valley Telephone Company structural location data can be used to identify structures.

7.   The Bureau also sought comment on alternatives to the Alaska Population-Distribution Model that may better identify populated areas. The Bureau specifically sought comment on using a database of broadband-serviceable locations to identify the specific locations within a census block where fixed broadband is unavailable.

8.   Finally, the Bureau proposed to use the Alaska Population-Distribution Model to identify the census blocks in remote areas of Alaska that are eligible for use of frozen support under the Alaska Plan (frozen-support eligible blocks), and it noted that the Bureau's list of blocks developed using the methodology was the same as the list submitted by GCI. No commenter offered any alternatives to this proposal.

9.   The Bureau adopts the Alaska Population-Distribution Model to estimate the number of people in remote parts of Alaska who have access to mobile service in census blocks partially served by providers participating in the Alaska Plan. To assess a participating provider's satisfaction of its service commitments at the 5 and 10-year performance benchmarks, the Bureau will use 2010 block-level population census data and the provider's Form 477 data, in conjunction with the Alaska Population-Distribution Model, to estimate the number of Alaskans in remote parts of the state who are covered by the provider's network (using the technology identified in the commitment). No commenter proposed an alternative approach, and the sole commenter, ATA, supports use of the model. The Bureau agrees with ATA that the Alaska Population-Distribution Model is the best currently available method for determining whether mobile providers meet their service commitments. In addition, the Bureau believes that the

model is the best available methodology that likely will be available by the 5-year mark and that

the same methodology should be applied to both the 5 and 10-year benchmark. Using two

different methodologies for the 5 and 10-year evaluations would result in inconsistent evaluation

of the commitments and could jeopardize the Commission's ability to enforce those

commitments.

10.   *Determining Whether Providers Have Met Their Commitments*. Although the

Alaska Plan Order required mobile participants to specify the number of people that they would

commit to serve, it did not address how providers would calculate this number, other than to note

that the Commission would use mobile providers' nationwide coverage polygons from Form 477

for the analysis. Form 477 data, however, which reflect mobile providers' coverage area, do not

necessarily reflect the number of people served in Alaska. A map that reflects 75% coverage of

the geographic area of a census block, for example, does not mean necessarily that 75% of the

population of that census block is covered by that provider, given that population generally is not

evenly distributed through a census block in remote areas of Alaska and that census blocks may

be very large and sparsely populated.

11.   To determine whether mobile providers have met their service commitments

using their Form 477 nationwide coverage polygons, the Commission will superimpose these

coverage polygons onto the Alaska Population-Distribution Model to distribute 2010 census

population throughout the census block. Commission staff then will analyze how many people

in that census block are located within the mobile provider's coverage area to determine the

number of people served by that provider.

12.   *Exceptions*. The Bureau also adopts the four exceptions to the model that it

proposed in the Alaska Population Model Public Notice (in and around Unalaska, near Nome

and Unalakleet, in the Prudhoe Bay area, and in the Copper Valley area). Because of the unique nature of these four areas, the alternate data sources better reflect the location of population than the Alaska Population-Distribution Model; in addition, no commenters object to these exceptions. Allowing these limited exceptions to the model will provide more granular data of where people are located in remote areas, and it will ensure that participating mobile providers are deploying service that will benefit Alaskans.

13.	The Bureau rejects ATA's request for mobile providers to "submit available evidence regarding the true location of population no later than six months before the next approaching benchmark," which the Bureau interprets to be a request to submit additional exceptions to the Alaska Population-Distribution Model by June 30, 2021 (six months before the 5-year mark of December 31, 2021). First, the Bureau notes that mobile providers already have had an opportunity to submit additional exceptions in response to the Alaska Population Model Public Notice, issued in February, and no commenter has identified any exceptions other than the four exceptions that the Bureau adopts here. Second, permitting the submission of additional exceptions after providers' four-year performance plan resubmissions, due December 31, 2020, would unnecessarily complicate the Bureau's review of those resubmissions, which must include population coverage commitments based on the model the Bureau adopts herein. The Bureau therefore declines to allow mobile providers to submit additional exceptions to the model and find the amount of time already allowed for such requests to have been sufficient.

14.	*Frozen-Support Eligible Census Blocks*. Finally, the Bureau adopts its proposal to use the Alaska Population-Distribution Model to identify those census blocks in remote areas of Alaska that are eligible for frozen support under the Alaska Plan and that can be counted by participating carriers towards their performance commitments. Specifically, the Bureau uses the

model to identify those census blocks in remote Alaska where, as of December 31, 2014, less than 85% of the population was covered by 4G LTE service of providers that are either unsubsidized or not eligible for frozen support in Alaska. The Bureau applies the Alaska Population-Distribution Model—in combination with 2010 block-level population census data and Form 477 4G LTE coverage data for those unsubsidized or ineligible providers as of December 31, 2014—to generate the list of frozen-support eligible blocks.

15.   As the Bureau explained in the Alaska Population Model Public Notice, the list of census blocks generated using our proposed Alaska Population Distribution Model aligns with the list of census blocks eligible for frozen support that GCI submitted on November 29, 2016. Commenters do not object to this list of census blocks, and the Bureau finds that it is the most accurate list of census blocks eligible for frozen support. Accordingly, the Bureau will use this list of frozen-support eligible census blocks to determine if mobile providers have met their service commitments at the 5 and 10-year benchmarks of the Alaska Plan. Consistent with the Alaska Plan Order, participating providers "may only satisfy their performance commitments through service coverage" in those census blocks included on the list.

16.   Accordingly, IT IS ORDERED, pursuant to the authority contained in sections 1-4 and 254 of the Communications Act of 1934, as amended, 47 U.S.C. 151-154 and 254, and sections 0.91, 0.131, 0.291, 0.311, and 1.106 of the Commission's rules, 47 CFR 0.91, 0.131, 0.291, 0.311, and 1.106, and the delegated authority contained in the Alaska Plan Order, 31 FCC Rcd 10139, 10166, para. 85, this Order IS ADOPTED.

Federal Communications Commission

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